UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,462	09/29/2006	Gheorghe Sorin Stan	NL040330US1	9390

24737 7590 02/16/2011

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
ORTIZ CRIADO, JORGE L	
ART UNIT	PAPER NUMBER
2627	
MAIL DATE	DELIVERY MODE
02/16/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,462	STAN, GHEORGHE SORIN	
	Examiner	Art Unit	
	JORGE L. ORTIZ CRIADO	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 November 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11/23/2010 have been fully considered but they are not persuasive.

Applicant argues that either Kono or Harada et al. teaches, discloses or suggests "an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement".

The examiner cannot concur with the Applicant because Kono clearly discloses an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement, at very least focus error; focus intensity are monitored while focusing a write light beam in a focal spot at a target storage layer, an error on the focus error monitored signal and an error on the light intensity indicate an axial focus spot displacement [0038].

Furthermore, as previously indicated previously although Harada et al. does not expressly disclose to decide that spot displacement when an error on the two of the input signals are indicating, but from the teachings, it would have been obvious to one of an ordinary skill in the art at the time of the invention to decide from the two or more inputted signals and monitor and decides based on both and/or all signals inputted as desired, providing integration, robustness, reliability and accuracy by confirming and redundantly affirming the errors, the access device can reliably decides of inhibition of writing and with quick response.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 11-13 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kono EP 1154412.

As per claim 1, Kono discloses a method of preventing damage when writing information in a storage layer of a multi-layer optical storage medium, comprising acts of:

monitoring a plurality of distinct signals (at very least focus error; focus intensity, tracking signals etc. are monitored) while focusing a write light beam in a focal spot at a target storage layer, an error on the two distinct input signals (focus error monitored signal and light intensity) indicating an axial focus spot displacement (See [0038] and at col. 9 lines 11-15);

inhibiting the writing process in case of an axial focus spot displacement (as performed by focus monitor 16; [0026]; [0033]; in Fig. 2; Fig. 5 Fig. 6.

As per claim 2, is rejected for the same reasons of anticipation outlined above, Kono further discloses such medium access device (Fig. 2).

As per claim 3, Kono further discloses comprising a driver circuit (4) for driving the light beam generating means in accordance with a data signal representing data to be written, the

driver circuit having a control input; wherein the write inhibit means (16) have an output coupled to said control input of the driver circuit, the write inhibit means being designed to generate a command signal for the driver circuit such as to effectively inhibit the driver circuit in case of an axial focus spot displacement event (see Fig. 2).

As per claim 5, Kono further discloses comprising, the a inhibit circuit (16) has at least three different inputs (at very least focus error; focus intensity, tracking signals etc. are monitored) capable of indicating axial focus displacement; the write inhibit circuit being designed to monitor at least two (focus error; focus intensity) of its input signals and to inhibit the writing process if at least two of the input signals are indicative of the occurrence of an axial focus spot displacement (See at col. 9 lines 11-15).

As per claim 6, Kono further discloses comprising having at least two inputs for receiving at least one input signal capable of indicating an axial focus displacement; the write inhibit means being designed to monitor an input signal, to calculate an axial focus displacement (Q) from the input signal, and to decide that the input signal is indicative of an axial focus spot displacement if the calculated axial focus displacement exceeds a predetermined displacement threshold (Fig. 5, Fig. 6Th).

As per claim 7, Kono further discloses the write inhibit circuit has at least two inputs for receiving at least two input signals capable of indicating an axial focus displacement; the write inhibit means circuit designed to monitor an input signal, to monitor for the possible occurrence

of a predefined characteristic (S signal) feature of the input signal, and to decide that the input signal is indicative of an axial focus spot displacement if such characteristic feature occurs (See Figure 5).

As per claim 11, for the same reasons of obviousness as outline above, Kono teachings further comprising at least one optical detector (7) for receiving light reflected from the storage medium; the write inhibit means (16) being designed to monitor at least one signal derived from at least one detector output signal (see Fig. 2).

As per claim 12, for the same reasons of obviousness as outline above, Kono teachings the write inhibit means (16) being designed to monitor at least one of a signal corresponding to the reflected central aperture signal obtained from a forward-sense diode of the sensor, or to monitor at least a signal corresponding to the focal error signal (S), or to monitor at least a signal corresponding to the focal error signal integrated with a predetermined time constant (see Figs. 5, 6).

As per claim 13, Kono discloses at least one of DVD-discs or BD discs [0002].

As per claims 20 and 21, Kono discloses at very least two of the displacement error signals.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. JP 2004-079103.

Harada et al. discloses (See Abstract; FIGS. 1-2) a medium access device for preventing damage when writing information in a storage layer of a multi-layer optical storage medium, the medium access device comprising: a light beam generator (laser diode not shown; [0012]) for generating a write light beam; a write inhibit circuit (44; 46; 28; CPU; Fig. 2) monitor plurality where at least two distinct input signal while focusing the write beam in a focal spot at a target storage layer to detect an axial focus spot displacement (acceleration), and a writing process in case of the axial focus displacement event (acceleration detection), an error on the input signals indicates the axial focus spot displacement, wherein the write inhibit circuit monitors the at least two input signals are "capable of" indicating an axial focus spot displacement,

determining a speed with which said at least one input signal changes in time (defined by acceleration), and deciding that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes.

Harada et al. discloses [0019] detecting for axial or radial displacement (e.g. focus; tracking) detected inputs to the write inhibit circuit; monitor at least two of its inputs signals to detect such displacement.

Although Harada et al. does not expressly disclose to decide that spot displacement when an error on the two of the input signals are indicating, but from the above teachings, it would have been obvious to one of an ordinary skill in the art at the time of the invention to decide from the two or more inputted signals taught by Harada et al. and monitor and decides based on both and/or all signals inputted as desired, providing integration, robustness, reliability and accuracy by confirming and redundantly affirming the errors, the access device can reliably decides of inhibition of writing.

As per in claim 15, Harada et al. discloses the write inhibit circuit is designed to inhibit the writing process if a time-derivative (defined as acceleration, which is a time derivative) of said at least one input signal predicts an axial focus displacement event (see Fig. 2; Abstract).

As per claim 16, Harada et al. discloses wherein a time-derivative particularly of a higher than a first order time derivative, because it is clearly understood since that acceleration is defined as the **second order** derivative displacement of a moving object; in this case objective lens thru focusing.

The first order derivative corresponds to merely the velocity displacement of a moving object, which one of as ordinary skill in the art would have found obvious that such analogous interrelationship for time derivative were at the time of the invention known.

It is notoriously well known that if x were the position of an object and t the time, then the first derivative is the velocity, the second the acceleration, and this would describe the motion of the object. Hence, the mere selection of the derivative to be used is a mere design choice and/or design equivalent analogous alternative at the time of the invention.

As per claim 17, Harada et al. discloses wherein the time-derivative is higher than a first order time derivative (it is clearly understood since that acceleration is defined as the **second order** derivative displacement of a moving object; in this case objective lens thru focusing).

Claims 18 and 19 are draw to the access device using the method of claims 14 and 15 above and rejected for the same reasons of obviousness.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono EP 1154412 in view of Harada et al. JP 2004-079103.

Kono also provide that is several (two or more) signals can be inputted to a means to so that they are monitored, but does not expressly disclose monitoring to determine the speed with which said at least one of its input signals changes in time or such as a time-derivative, and to decide that the input signal indicates that an axial focus spot displacement is about to occur on the basis of an evaluation of such changes.

However, it such monitored input signal are well known in the art as evidenced by Harada et al. discloses (See Abstract; FIGS. 1-2) a medium access device having such write inhibit means for inhibiting (44; 46; 28; CPU; Fig. 2) a writing process in case of an axial focus spot displacement (acceleration detection), wherein the write inhibit means is designed to monitor at least two input signal capable of indicating an axial focus displacement (acceleration), to determine a speed with which said at least one input signal changes in time (defined by

acceleration), and to decide that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes.

It would have been obvious to one of an ordinary skill in the art at the time of the invention to monitor such speed change in time as taught by Harada et al, in order to avoid write errors and prevent and anticipate such possible errors by detection of the speed changes, as taught by Harada et al.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kono EP 1154412 in view of Hayashi et al. US Patent Application Publication 20020101803.

Kono does not expressly disclose monitoring having at least one vibration/acceleration sensor and the write inhibit means being designed to monitor at least an output signal from the at least one vibration/acceleration sensor. It is well known in the art the use of such vibration sensors to monitor vibrations or disturbances in the optical system as to inhibit writing operations in response to such events, as evidenced by Hayashi et al. (see Fig. 1; #100).

It would have been obvious to one of an ordinary skill in the art to provide a vibration sensor to monitor the same in order to avoid error in the writing operations by interrupting the writing in response to an event of shocks etc. as taught by Hayashi et al.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JORGE L. ORTIZ CRIADO whose telephone number is (571)272-7624. The examiner can normally be reached on Mon.-Fri 10:00 am- 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jorge L Ortiz-Criado/
Primary Examiner, Art Unit 2627